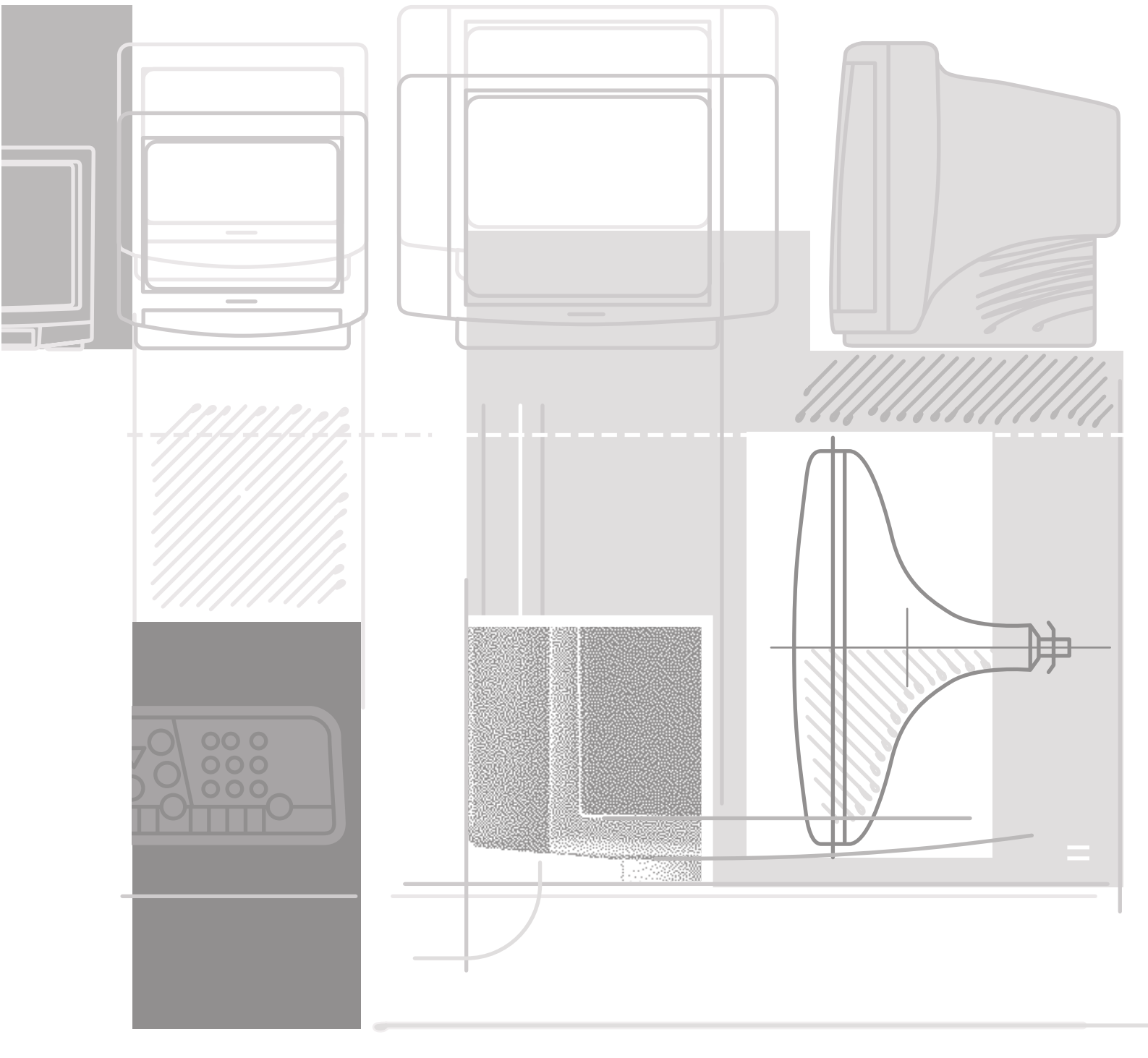
GRUNDIG

COLOR TELEVISION

M 70-1690 TOP/LOG



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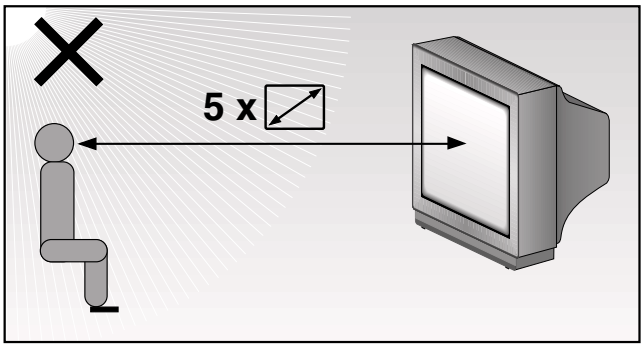
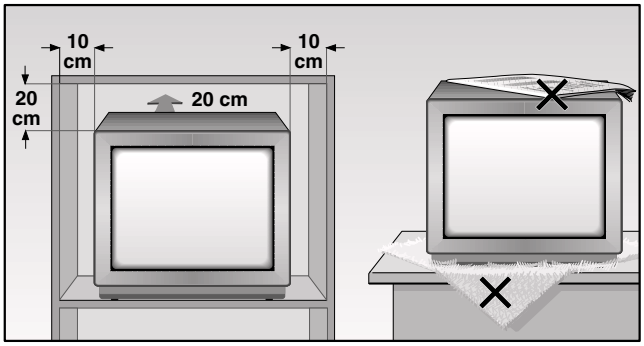
Notes on Safety and Setting Up



When setting up your television, select a location where as little light as possible falls on the screen.

The ideal viewing distance is five times the diagonal width of the screen.



If the television is to be built into a compartment or similarly enclosed, minimum distances must be maintained.

Do not cover the ventilation openings on the back.

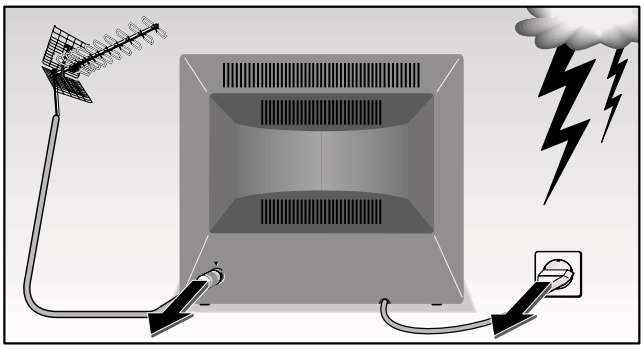
The heat exchange inside the unit generates an air circulation. which attracts dust particles (carpet and curtain fibres and home dust). These particles accumulate inside the ventilation slots obstructing these over the years and causing a build-up of heat.

Heat build-up can reduce the service life of your television, and can also be dangerous.

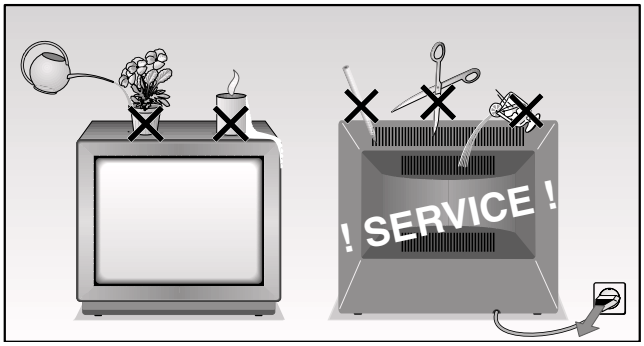
For your own safety, let remove the dust deposits by a specialist from time to time.

Never set up speakers next to the unit.

When setting up and using this unit, please make sure that the mains connection wire is free and not jammed in order to avoid damage.



Never place the television near heat sources.
Even if your television is switched off, it can still be damaged by lightning striking the mains and/or aerial cables.
For this reason, you should always disconnect your television from the mains and the aerial system during thunderstorms.



Never expose the unit to moisture.
Do not insert foreign objects into the ventilation openings on the back.
Caution! High voltage!

The TV receiver is provided with a Megatron-picture tube with a special surface layer.

This has the advantage of an antistatic effect, i.e. the surface does not attract dust particles.
When the set is switched on, static charges of the picture screen are avoided to a large degree by the special surface layer.

Clean the picture screen of your TV set only with a moistened soft cloth.
Use clear and clean water only.
When cleaning the picture screen, do not apply pressure (abrasion, scratches).

Do not stick labels of any kind onto the picture screen.

Connecting and Setting Up

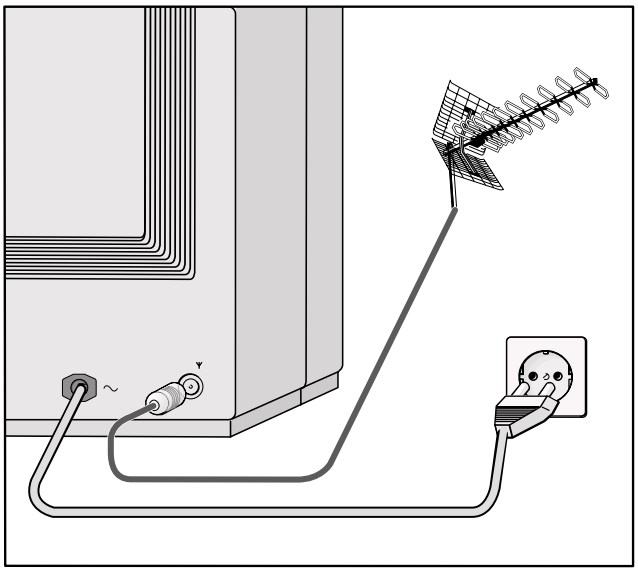
Connecting the Unit

Connecting the unit to the aerial

Plug the aerial cable into the aerial socket Y on the unit.

Connecting the unit to the mains

Plug the mains cable into the wall socket.



Additional Information for Units sold in Great Britain

Units sold in GB are suitable for operation from a 240 V AC, 50 Hz mains supply.

In case this appliance is supplied with a Safety Standard Approved mains lead fitted with a non-rewireable 13 Amp mains plug which, if unsuitable for your socket, should be cut off and an appropriate plug fitted by a qualified electrician. The fuse and fuse holder must be removed from the plug as accidental insertion of the redundant plug into a 13 Amp socket is likely to cause an electrical hazard.

Note: The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13 Amp socket elsewhere.

If it is necessary to change the fuse in the non-rewireable plug, the correct type and rating (5 Amp ASTA or BSI approved BS 1362) must be used and the fuse cover must be refitted. If the fuse cover is lost or damaged the lead and plug must not be used until a replacement is obtained. Replacement fuse covers should be obtained from your dealer.

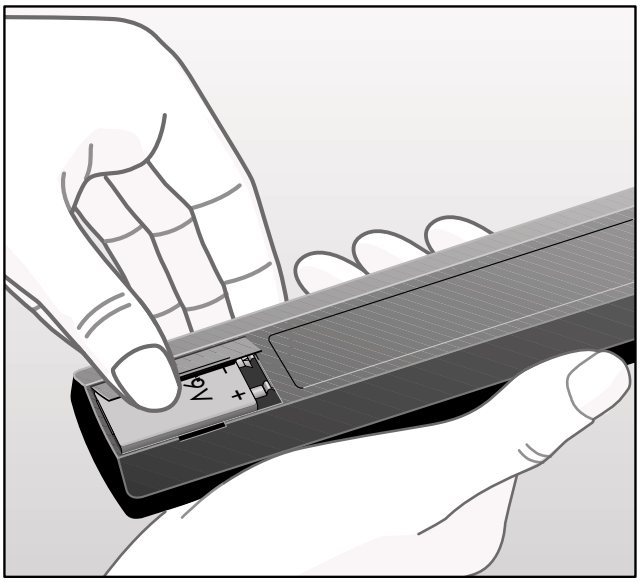
If a non-rewireable plug or a rewireable 13 Amp (BS 1363) plug is used, it must be fitted with a 5 Amp ASTA or BSI approved BS 1362 fuse. If any othe type of plug is used it must be protected by a 5 Amp fuse either in the plug or at the distribution board.

Important:
The wires in the mains lead are coloured in accordance with the follow-ing code:

BLUE – NEUTRAL
BROWN – LIVE

As the colours of the wires in the mains lead of your appliance may not correspond with the coloured marking identifying the terminals in your plug, proceed as follo-ws:
Connect the BLUE coloured wire to plug terminal marked with the letter "N" or coloured black.
Connect the BROWN coloured wire to the plug terminal marked with a letter "L" or coloured red.
In no circumstance must any of the wires be connected to the terminal marked with a letter "E", earth symbol ⏚ , coloured green or green and yellow.

Replacement mains lead can be obtained from your dealer.



Inserting Batteries into the Remote Control Handset

Remove the battery compartment cover by pressing on the catch and then removing the cover.

Insert the battery supplied. Make sure it is inserted correctly (note the markings in the battery compartment).

Switching the Unit On and Off

Switching on: Press ⏻ button on unit.

Switching to standby: Press ⏻ button on remote control handset once.

Switching the unit on and off (continuet).

Switching on from standby: Press P+ or 1…0 button.

Switching off with remote control handset: Press ⏻ button twice (switching on again only possible on the unit).

Switching off on the unit: Press ⏻ button.

If you do not use the televison for extended periods of time (e.g., at night), it is recommended to activate the ecological mains switch
This will ensure that the unit is completely switched off from standby.
This helps you to save energy.
For further information see the "Settings" function in the "Special Functions" menu (on page 22).

Assigning Channel Positions

The Automatic Tuning System "ATS euro plus"

After switching on the television set, the "ATS euro plus" page appears.
If this page does not appear, press and hold down the P/C button until the "ATS euro plus" page appears on the screen.
The dialogue lines at the bottom of the screen are used as user guide.
The signs ›, ‹, ⌄, ⌃ are symbols for the following buttons on the remote control handset:

⌄, ⌃ = programme selection buttons P− and P+

›, ‹ = volume ◀ and ▶

OK = OK button

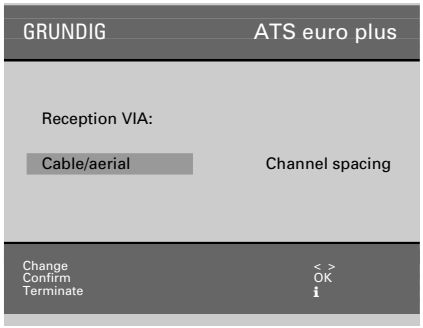
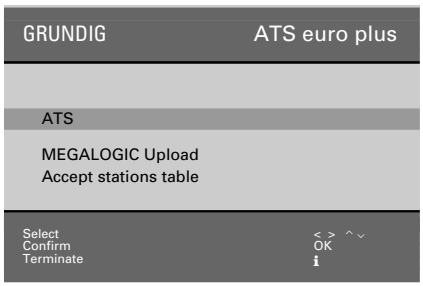
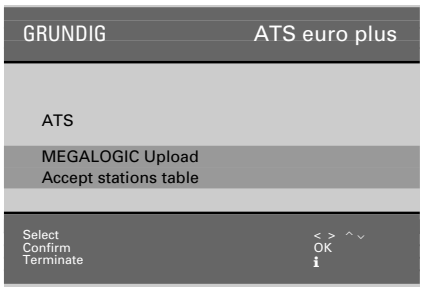
In the following text, the remote control buttons instead of the symbols will be shown.

Your television is equipped with "ATS euro plus" (Auto Tuning System). This new system offers you the advantage of automatic channel position assignment.
This search and memory system scans the entire reception range, stores the channels found, and enters them with their respective station name (abbreviation) into a TV station table.

You can change the automatic channel position assignment as you wish. For example, for channels without identification, you can choose a name (station name) in a list of abbreviations displayed on the screen and assign it the channel.

Press the following buttons on the remote control	You will see this on the TV screen	Explanations
1. Menu guide language a) Select a language ◀ or ▶ b) Confirm OK		You can choose between several languages for the on-screen dialogue with your television. After you select a language, all menu guide messages and information will appear in the language you selected. German is preset at the factory.
2. Country (location) a) Select a country ◀ or ▶ b) Start ATS OK		The "ATS euro plus channel search" is started. The television searches for all available channels, sorts, and stores them. This procedure can take one minute or more, depending on the number of channels that can be received. When the search procedure is completed, the TV picture received on the first channel position will be shown. If you can receive channels in the SECAM L NICAM colour standard, observe the information given on page 12.

Assigning Channel Positions

Press the following buttons on the remote control	You will see this on your TV screen	Explanations
3. Particularity in France a) Setting for aerial or cable system with standard channel spacing b) Setting for aerial or cable system with different channel spacing ◀ or ▶ OK		If you select "F" as country, this menu wil be displayed. It allows you to select between "Channel spacing" and "Frequency (MHz) for the ATS function. In case a), select "Channel spacing". After having pressed the OK button, the ATS will search for channels on which programmes are received. In case b), select "Frequency (MHz". After having pressed the OK button, the ATS will search for frequencies on which programmes are received. If you are in doubt, consult your spepcialized dealer.
4. Selection between: **a) ATS station search** Start ATS a) OK or		If a video recorder equipped with the MEGALOGIC functions is connected to this TV set (the connection must be made via the EURO-AV sockets – socket AV2 on the TV set – with a fully wired EURO-AV cable), the display shown opposite will appear. It is then possible to select between the functions ”MEGALOGIC Upload” and ”ATS”.
b) Transfer the stations table (programme position data) from the video recorder to the TV set b) P− VCR1 ◀ or ▶ VCR2 start transfer OK		**Transfer of the TV stations table from the video recorder to the television set.** The TV set is provided with the MEGALOGIC system. In connection with a video recorder which is provided with the same system, operation of the two sets becomes very convenient. It is possible to transfer the data of the programme positions (stored channels) from the video recorder to the TV set. The ATS search function then is no longer necessary. After transferring the data, you can immediately watch TV and simultaneously record the programme on the video recorder. For this, the TV set (socket AV2) and the video recorder (Euro-AV socket) must be connected by means of a Euro-AV cable (all pins used). During data transfer, the message ”Transfer of VCR stations table” as well as the programme position number and the station name are displayed. When data transfer is completed, the stations table is displayed on the picture screen.

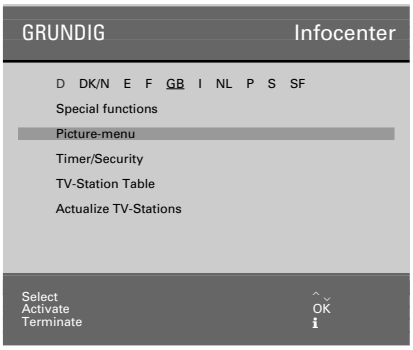
Assigning Channel Positions

ATS euro plus – Update

If you have already found and stored programmes (channels) with the "ATS euro plus" tuning system and wish to start another ATS euro plus search to update programme allocation in the TV station table – for example, when the reception conditions have changed because of newly offered programmes - select the menu point "Actualize TV-Stations" in the Infocenter.

How to proceed:

Press the ⓘ button then the OK button.
The "GRUNDIG Infocenter" appears on the screen.



Use the P− button to select the menu line "Actualize TV Stations".

Press the OK button.
The automatic tuning system is started with the last settings (language and country).

The newly found channels ("programmes") are added to the existing channels in the TV station table and highlighted in blue.

It is possible to shift the programmes to other programme positions (see page 9).

If a completely new run of the automatic tuning system is required (e.g., when changing location or in the case of connection to a cable TV system at a later date), start ATS as described on page 5. In this case, the previous programme position data is cleared.

Pressing the ⓘ button calls up the storage function and pressing the OK button stores the new programme allocation into memory.

Assigning Programme Positions Manually

Example:

You wish to assign a programme transmitted on special channel S 08 in SECAM L/L' norm to programme position 10.

How to proceed:

Select programme position (P) 10.
Press the P/C button then the ◀ button.

Press the P+ button;

C changes to S (for special channel).

Press the ▶ button;
the cursor jumps to the channel entry position.

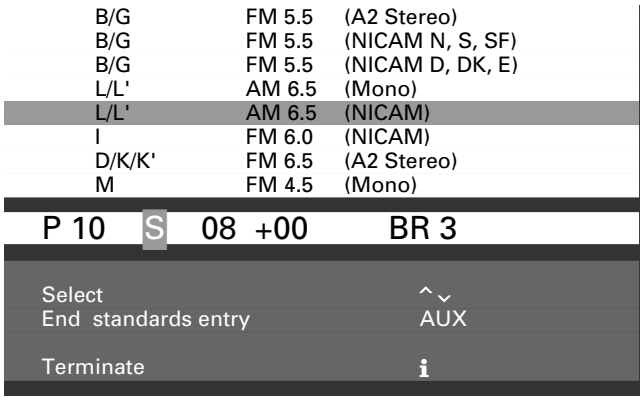
Press the 0 and 8 button. S 08 is visible in the data line.

It is also possible to select a channel by means of the manual channel search.
To do this, press the P− or P+ button. The channel search is started and will stop at each channel which can be received.
The TV set adjusts automatically the best possible picture quality.

Press the AUX button.

A list of TV standards (norms) which can be received and handled by the TV set is added to the display.

Press the P− or P+ button to highlight L/L'.


B/G FM 5.5 (A2 Stereo)
B/G FM 5.5 (NICAM N, S, SF)
B/G FM 5.5 (NICAM D, DK, E)
L/L' AM 6.5 (Mono)
L/L' AM 6.5 (NICAM)
I FM 6.0 (NICAM)
D/K/K' FM 6.5 (A2 Stereo)
M FM 4.5 (Mono)
P 10 S 08 +00 BR 3
Select
End standards entry
AUX
Terminate

Press the AUX button.

The previous data line is displayed again. You now can give the programme position a station name (abbreviation of max. 4 characters) by pressing the ▶ button, then following the on-screen user guide (dialogue lines).

Allocating programme position 10 to special channel S 08, SECAM L/L' norm, is now concluded.
Press the ⓘ button to return to the TV picture or repeat the above steps to allocate further programme positions.

In difficult reception conditions it may be necessary to improve the picture quality by manual fine tuning.

Fine Tuning

Press the P/C button.

Press the ▶ button until the highlighted cursor has reached the 00 position (for fine tuning).

Use the P+ (63 steps) or
P− button (64 steps)

to adjust the optimum picture and sound quality.

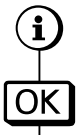
Changing the Programme Position Assignment

The TV Station Table

The TV station table shows you the programme position assignment with the associated station names.
You can change this programme position assignment according to your personal preferences and assign a station name to stations without identification.

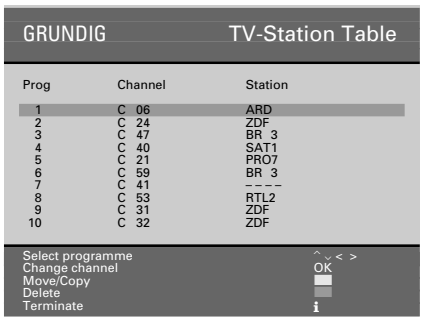
Press the following buttons on the remote control	You will see this on the TV screen	Explanations

1. Call up the "GRUNDIG Infocenter"



2. Select the "TV-Station Table" line

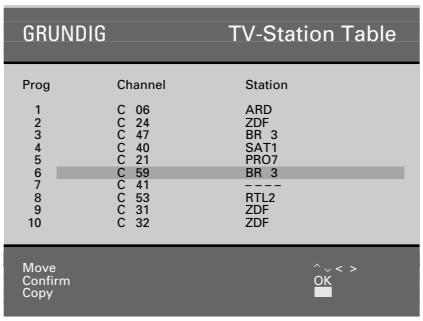
a) confirm



You can leave the TV station table by pressing the ⓘ button. Your settings are automatically stored in memory.

The following chapters
3.1 – 3.3 describe the different functions.
Select the desired function(s).

Changing the Channel Position Assignment

Press the following buttons on the remote control	You will see this on the TV screen	Explanations
3.1 Changing the order of the channels (shift or copy)*		If you should not like the order of the channels ("programmes), it is possible to change the order at any time.
a) Select programme position P– or P+		When shifting a channel, only the order of the data on the channel positions will be changed. When copying a channel, the already existing data of the marked channel position will appear a second time on the selected channel position (where the cursor bar is located).
b) Mark programme position ○ (shift: yellow button 1x; copy**: yellow button 2x)		If desired, repeat this procedure for further channels ("programmes").
c) Select new programme position (shift; copy) P– or P+ OK		
3.2. Clear programme position data*		
a) Select programme position P– or P+		
b) Clear programme position data ○ (red button)		

* The steps 1 and 2 explained on page 8 must already be executed.

** Copying is only possible after having fitted a SAT module to the set.

Changing the Programme Position Assignment

Press the following buttons on the remote control	You will see this on your TV screen	Explanations

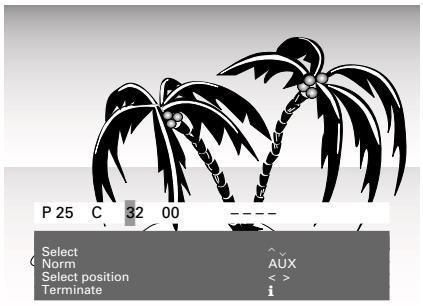
3.3 Enter a station name and channel number or modify the existing one*

a) Select programme position

P– or P+

b) Visualize the data of the programme position

OK

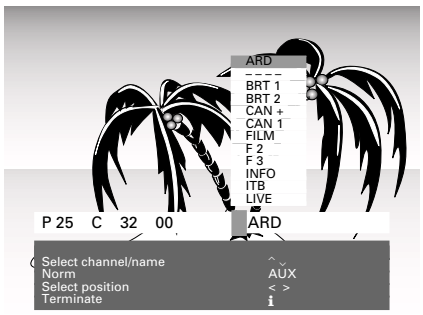


c) Enter channel number

1 … 0

If you store the channel numberr 00 on a programme position, it is no longer possible to select higher programme positions ("return point").

d) Select existing station name



If you cannot find the desired name in the list, you can enter your own. In order to do so, press the ▶ button once, and using the P– or P+ button, select the desired letter/number.

Press the ▶ button to select the next position.

Press the i button to complete this procedure.

e) Select new station name

P– or P+

f) Terminate

i

* The steps 1 and 2 explained on page 8 must already be executed.

The Remote Control Handset

⏻ Press button once: Unit is switched to standby.
Press button twice: Unit is switched off completely

①…⓪ Select programme position and
⓪AV switch the set on from standby, or select AV position

P/C Call up programme data.
Press and hold down for 4 seconds: Acces to ATS

AUX Preselect button for various functions:

ⓘ Acces to Infocenter. After message »Menu ⟶ OK«, press OK button.

P+ Select programme step by step (1, 2, 3 ...)

P− Select programme step by step (...3, 2, 1)

When holding down the P+ or P− button, the station names will scroll on the TV screen. When releasing the pressed button, the television switches to the selected programme position.

or

P+ Move cursor (write position) up

P− Move cursor down

OK – Modify and activate various functions.

◀ ▶ Adjust volume, or

◀ ▶ Move cursor to the left, to the right.

Colour contrast

○ VIDEO Video recorder remote control (press and hold down VIDEO button)

○ PIP not used

○ 16:9 Picture format

○ IDTV not used

○ TSwitch sound on/off (mute)
Access to "Audio Menu"

Teletext mode ↔ TV mode

○ not used

○ Shift programme position data when allocating programme positions.

○ Time on/off

○ Clear data when allocating programme positions.

Brightness

○ SAT Satellite receiver remote control (press and hold down SAT button)

Remote Control of a Video Recorder

The remote control handset of your television enables also remote control of Grundig video recorders. Your specialized dealer can tell you which video recorders are suited for this.

Press and hold down the ○ VIDEO button.
This switches the remote control handset into the video recorder mode.
Then press the desired function button.

The following table shows you which buttons are to be used for the different recorder functions.

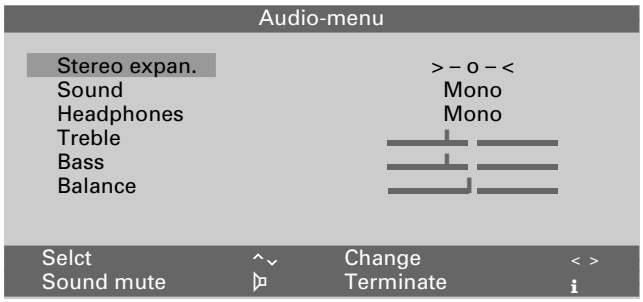
◀◀ (Numeric button 1) = Reverse picture search
▶▶ (Numeric button 2) = Forward picture search
● (– button) = Start recording
■ (+ button) = Stop
◀◀ (Numeric button 7) = Fast rewind
▶▶ (Numeric button 8) = Fast forward wind
II (– button) = Pause
▶ (+ button) = Start playback
▼ (Numeric button 4) = Programme position –
▲ (Numeric button 5) = Programme position +

Changing the Sound Setting …

… with the Audio Menu

Calling up the Audio Menu

Press the ◯▷ button. The audio menu appears.



The "Stereo expan." line is selected.

After each adjustment you can switch off the "Audio-menu" by pressing the ⓘ button.

Stereo expansion

This improves the acoustic pattern during stereo transmissions and improves the sound of mono transmissions.

Adjust with the ◀ or ▶ button.

Sound (stereo, two-channel sound, mono)

If your television receives two-channel sound transmissions, for example, when a film is broadcast in the original sound track and transmitted on sound channel 2, and the synchronized version is broadcast on sound channel 1, you can

select the "Sound" line by pressing the P- or P+ button and

select the sound channel by pressing the ◀ or ▶ button (sound channel selection also possible when using headphones).

Your television automatically switches to stereo if the programme is transmitted in stereo.

If stereo reception is of insufficient quality, you can switch to mono by pressing the ◀ or ▶ button.

If you wish to always receive this channel in mono, enter ",MO" at the fourth position of the station identification (e.g., BBC,MO).
See chapter "Entering a station name", page 10.

If you can receive TV programmes in the SECAM L NICAM colour standard, make sure that one of the indications
NICAM A, NICAM B, NICAM Stereo or NICAM
is shown in the "Sound" line of the Audio menu.

If this should not be the case, check whether the SECAM L NICAM standard has been set on the programme position concerned.

To do this, quit the Audio menu and call up the data of the programme position to be checked by pressing the P/C button.

If you wish to assign a different TV standard to this programme position, follow the example given on page 7 in the chapter "Assigning Programme Positions Manually".

Indication of the sound transmission mode

Each time the station changes the sound transmission mode (e.g., from mono to stereo), the mode is displayed for approx. 4 seconds.
This indication takes also place when changing the programme, however only if the mode differs from the mono mode.

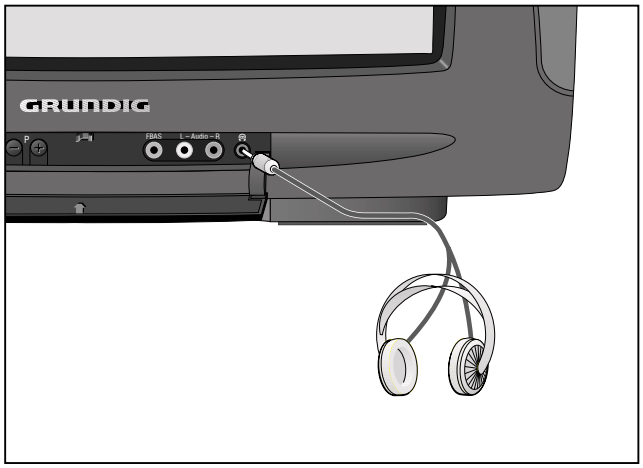
With the ⓘ button, the indication can permanently be displayed. Press ⓘ once again to remove the display.

Treble, bass, balance

The settings of these functions can be corrected as required. Select the corresponding line by pressing the P- or P+ button.
Correct with the ◀ or ▶ button.

Headphones

For headphones, change the settings in the Audio Menu as described in the previous chapters.



Connection

Insert the headphones plug (3.5 mm ø jack) into the headphones socket.

Changing the headphones volume

Press the AUX button to display the AUX menu.
Change the setting with the ◀ ▶ buttons.

Adjusting the Picture

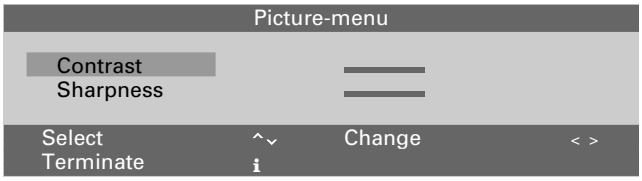
Contrast and Picture Sharpness

Press the ⓘ then the OK button.
The "GRUNDIG Infocenter" is displayed.

The "Picture-menu" line is marked in red.

Press the OK button.

The "Picture-menu" is displayed.



Select "Contrast", "Sharpness" or "Tint" by pressing the P− or P+ button.

The "Tint" value can only be adjusted with NTSC standard broadcasts.

Correct the setting by pressing the ◀ or ▶ button.

This television was tested with maximum contrast to verify the reliability of all components.
It is advisable to turn down the contrast to offer you the best picture quality depending on lighting conditions or on the location where your TV is set up.

Brightness and Colour Contrast

Press on the – or + side of the corresponding rocker button (☼, ◑) until the desired value is reached.

Brightness with the −☼+ button.

Colour contrast with the −◑+ button.

Corresponding scales are displayed on the picture screen.

The changed value is indicated.

The last set value for Sharpness, Tint, contrast, colour contrast, Sharpness, Tint and brightness is automatically stored in memory by:

switching from a normal to the AV programme position;
switching from one AV programme position to another;
switching to standby;
switching off with the mains switch.

The values are checked before storing.
If they have been reduced in such a degree that a reasonable picture impression is no longer obtained, the factory-preset settings (optimum values) will reappear when switching the set on again.

Switching the picture format

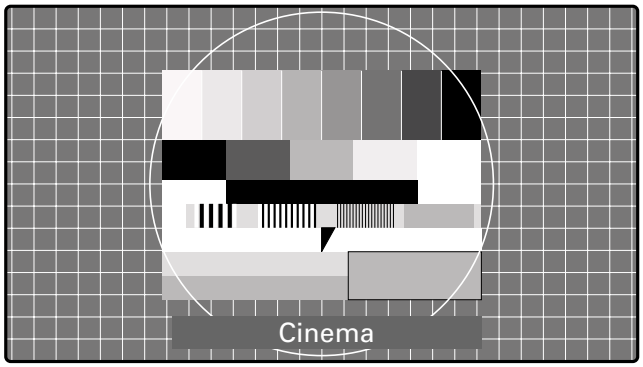
General

PALplus which was realised by European broadcasters and European consumer electronics companies is the compatible further development of the long tried and tested PAL colour TV system in 16:9 format.

PALplus broadcasts in 16:9 are specially indicated in relevant magazines and in teletext (ARD, ZDF).

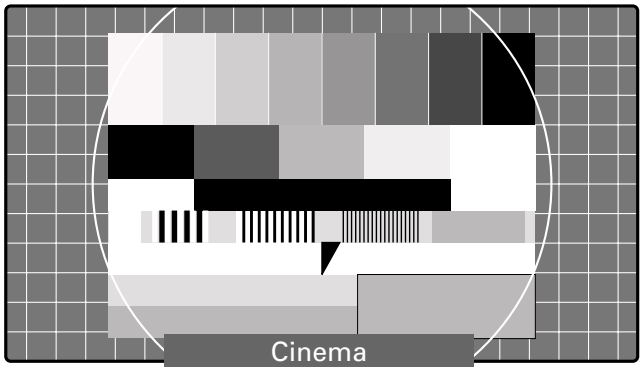
Operation

For 16:9-PALplus broadcasts select the » Cinema « format by pressing the ❍ 16:9 button repeatedly. » CINEMA « will be displayed briefly.



The Format 16:9; CINEMA and Panorama Zoom functions can be set by pressing the ❍ 16:9 button repeatedly.

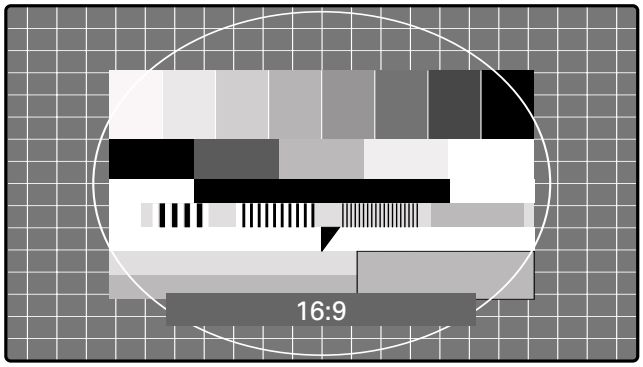
The Cinema operating mode reproduces 4:3 pictures in full format. The pictures broadcast are enlarged losing part of the picture at the top and the bottom. The picture geometry is however preserved.



This operating mode is particulary suitable for broadcasts in 16:9 format.
The black strips at the top and bottom of the picture which were normal up to now are covered over.

In Cinema mode if any displays are missing at the top or the bottom of the picture (for example the latest tennis score) you can switch to » Panorama Zoom « or » Format 16:9 «.

16:9 format

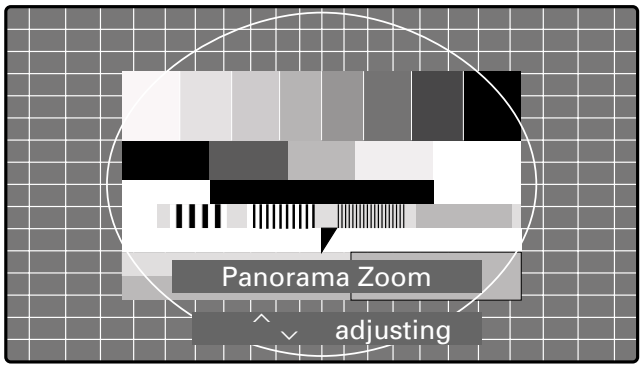


With 4:3 broadcasts when the » Format 16:9 « function is selected, the picture appears to be extended horizontally.

The picture geometry is stretched widthways.

With real 16:9 signal sources coming from an additional decoder (e.g. Settop decoder for a digital TV system) via the Euro-AV socket – the screen is filled completely and the picture geometry is correct.

Panorama Zoom format



With 4:3 broadcasts when the » Panorama Zoom « function is selected, the picture appears to be extended horizontally.

The picture geometry is stretched widthways.

This operating mode is suitable for cinema pictures broadcast by TV stations which have extreme width-height ratios.

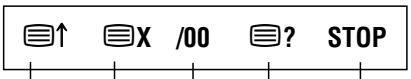
While the » Panorama Zoom « mode is displayed at the bottom of the screen as a user guide, the picture height can be set by pressing the P- or P+ button so that any remaining black strips at the top or bottom of the picture disappear.

Teletext

①…⓪ Select pages 100-899

Press ㊉ to display dialogue line

Display:



Enlarge character height

Bypass waiting times (actual-mode)

Directly call up subpage

Reveal answer

STOP pages

Select functions with ◀ or ▶ buttons.

Activate with OK button.

ⓘ Call up overview page

Teletext mode ↔ TV mode

○ (blue) Switch to next block

○ (yell.) Switch to next group with passage to next block.

○ (grn) Switch to next page with passage to next group.

○ (red) Return

Floftext

The coloured buttons lead to the topics shown in the dialogue line.

Teletext Mode

General

Teletext is an additional information that is broadcast by the TV station along with your TV programme.

The built-in Teletext decoder of your set enables you to display this additional information on the screen.

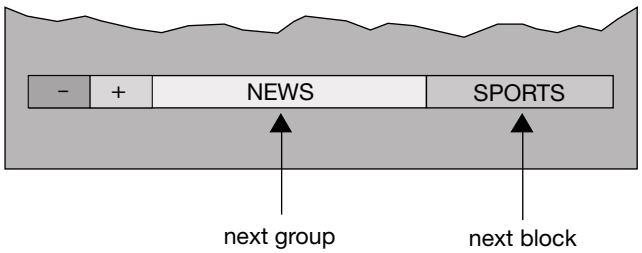
Teletext is transmitted in the form of texts or graphic representa-tions, or as subtitles to the TV programme.

The latter is intended to help the hard of hearing.

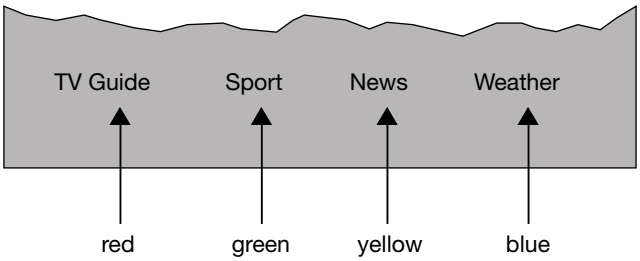
By means of information pages and dialogue lines, Teletext operation is made very easy. The indication in the dialogue lines denote the functions with the allocated buttons to use.

TOP/FLOF-Teletext

TOP (Table of Pages) and FLOF (Full Level One Features) are new methods for quick and easy selection of Teletext pages.
Using TOP and FLOF you can select Teletext pages without knowing the page numbers. This is possible since all Teletext pages are transmitted ordered according to topics - also called blocks - as if they were in a "filing box".
For example, the latest news are grouped in the block "Actualities". Further topics are for example the blocks "Sports", "TV Programmes" and "Service". In the case of TOP Teletext, the blocks are subdivided into several groups, eg: "Actualities" into the groups politics, economics, culture, etc. Within the groups you will find the normal Teletext pages.
With the help of the user's guide on the picture screen, Teletext operation is very simple and fool-proof. A coloured command line is visible on the bottom edge of the screen. The shown colours are the same as those on the remote control handset. In the case of TOP operation, the yellow field denotes the selected block and the following group. The blue field indicates the next block.



The blue button of the remote control handset is used to advance from one block to the other, the yellow button is used to go from one group to the next, and the green button is used to go to the next page. To return to the page the red button is used.
In the case of FLOF operation, a choice of subjects appears in coloured characters. The required subject is selected by pressing the corresponding coloured button on the remote control.



In this way, TOP and FLOF lead you quickly, easily, and surely to the goal - the desired Teletext page.
If no TOP or FLOF Teletext is transmitted by the station, a red colour bar with a - and a green colour bar with a + will appear in the commentary line.

Note

If the aerial signal is poor, eg: noisy, it may happen that the Teletext pages are not correctly reproduced. - If fine tuning on the TV set brings no improvement, we recommend you to let check your aerial system by a specialist.

What you should know

For the Teletext mode "Top", additional information is required from the TV station. - For this reason, after having switched on the TV set or after having changed the programme, please wait some moments until the GRUNDIG Top decoder has read the data into its memory and all of the information is at your disposal.

By pressing the button ▤ you can immediately return from each operating mode back to normal TV operation.

Please observe the currently displayed user's guide with the dia-logue lines on the bottom edge of the picture screen.

Teletext Mode

Operation

Using the numeric buttons ①…⓪, select a channel whose teletext pages you would like to view.

Switching Teletext On/Off

Press button ▤ on the remote control handset.

The contents page 100 or the Teletext page viewed last will appear.

Press button ▤ - Teletext is switched off.

TOP Mode

A red, green, yellow and blue field is shown at the bottom of the screen. Buttons of the same colors are found on the remote control.

With the red ❍ button of the remote control, you scroll backwards one page.

With the green ❍ button of the remote control, you scroll to the next available page (with overrun to the next group).

With the yellow ❍ button of the remote control, you switch to the next group. After the last group of the selected block, your are automatically taken to the next block (overrun).

With the blue ❍ button of the remote control, you switch from block to block.

Selecting Pages

Select the number of the desired page as **three figures** with the numbered buttons ①…⓪.

The number of the selected page appears at the top of the TV screen and the page appears after a short time.

The last viewed page can be selected by pressing the P/C button.

Overview Page/Programme Preview

You can switch directly to the programme preview (with TOP Text) or the overview page of the station you are currently viewing.

Press the ⓘ button.
The programme preview block or the overview page appears.

Multiple Pages/Page Stop

Several subpages can be combined under a single page number and these pages are automatically scrolled at an interval determined by the television station.
The presence of subpages under a single page number is indicated by, for example, 3/6 beneath the time, which means that you are looking at the 3rd page of a total of 6 pages.

If you want to look at a page for a longer period of time,

press the AUX button.
The dialogue line appears.

Select the STOP symbol with the ◀ or ▶ button.

Press the OK button.
"STOP" appears at the top of the screen. The contents of the page shown are kept on the screen and are no longer updated or switched to other subpages.

Press the OK button.
The STOP function is cancelled and the current subpage appears.

It is also possible to perform this function with the ◀ button without calling up the dialogue line.

Calling up a Subpage Directly

Press the AUX button (the dialogue line appears).

Select the /00 symbol with the ◀ or ▶ button.

Press the OK button.
The selected page number, e.g., S155/---- appears in the info line.

Enter the four-place subpage number that you want to call up with the numeric buttons, for example, the second page, sequence 0002. The desired subpage is sought and displayed.

Press the OK button.
The function is cancelled.

It is also possible to perform this function with the left side of the ⊖◉⊕ rocker button without calling up the dialogue line.

Teletext Mode

Doubling Character Size

Press the AUX button (dialogue line is displayed).

With the ◀ or ▶ button, select the ↑ symbol.

Repeatedly pressing the OK button doubles the character size in the following order:
Upper half of the picture,
lower half of the picture,
return to normal picture.

It is also possible to perform this function with the right side of the −/+ rocker button without calling up the dialogue line.

Reveal Answer

This function can be used on certain teletext pages to reveal the solution of riddles, or for programming a video recorder via VPS times.

Press the AUX button (dialogue line appears).

With the ◀ or ▶ button, select the ? symbol.

Press the OK button.
The hidden information is revealed.

Press the OK button.
The reveal function is cancelled.

It is also possible to perform this function with the ▶ button without calling up the dialogue line.

Watching Television During Teletext Mode

Updating a page – Bypassing waiting times

Certain teletext pages are continually updated, for example, stock market reports, sports announcements, and the latest news.

If you want to watch television and stay informed at the same time, first select a page of your choice, then

press the AUX button (dialogue line is displayed).

With the ◀ or ▶ button, select the X symbol.

Press the OK button.

The regular programme is still visible and the teletext symbol appears at the top of the screen.

If, for example, P143 appears in the info line, then

press the OK button.
The teletext page appears with the updated information.

This function can also be used to bypass waiting times while the teletext decoder searches for a page. When the page has been found, the indication P143, for example, appears in the info line.

Calling up a Subpage Directly

Press the AUX button (the dialogue line appears).

Select the /00 symbol with the ◀ or ▶ button.

Press the OK button.
The selected page number, e.g., S155/---- appears in the info line.

Enter the four-place subpage number that you want to call up with the numeric buttons, for example, the second page, sequence 0002. The desired subpage is sought and displayed.

While the page is searched you can watch TV.

To do this, use the ◀ or ▶ button to select the X symbol.

Press the OK button.

The TV picture appears with the Teletext symbol displayed at the top picture border.

As soon as the page is found or updated, it will appear on the picture screen.

To cancel the function:

press the AUX button (the dialogue line disappears).

Press the OK button.
The function is cancelled.

It is also possible to perform this function with the left side of the −/+ rocker button without calling up the dialogue line.

Page Catching

This function allows you to select a teletext page without entering the corresponding page number.

You can select desired teletext pages from the overview pages (pages designated with a three-digit page number).

Press the P− or P+ button.

Page-Catching" appears in the upper part of the screen.

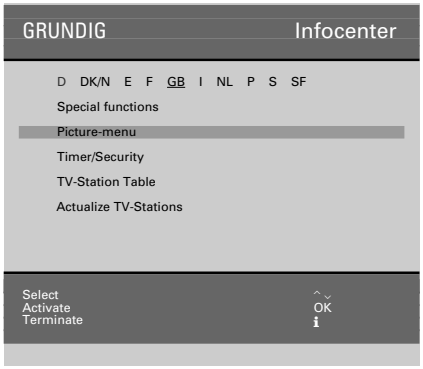
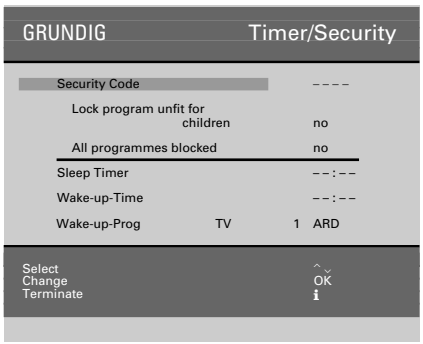
The first or last page number of the overview is highlighted by a frame (cursor)

Press the P− or P+ button to move the cursor to the desired page number.

Press the OK button.
The desired page appears on the screen.

Timer/Security Functions

With these functions you can block programmes unfit for children, block all TV programmes, and
enter a switch-off time (Sleep Timer) and/or a switch-on time (Wake up Time).

Press the following buttons on the remote control	You will see this on the TV screen	Explanations
1. Call up the "GRUNDIG Infocenter" ⓘ OK		By pressing the ⓘ button you can return to the current programme at any time.
2. Select the "Timer/Security" line P– a) confirm OK		The following chapters 3.1 – 3.4 describe the four different Timer/Security functions. Select the function that you need.

Convenient Functions

Press the following buttons on the remote control	You will see this on your TV screen	Explanations

3.1 Blocking programmes unfit for children*

a) Enter code as four places.

OK

1 … 0

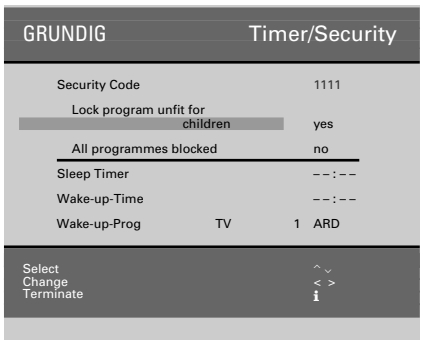
OK

b) Block programme: yes

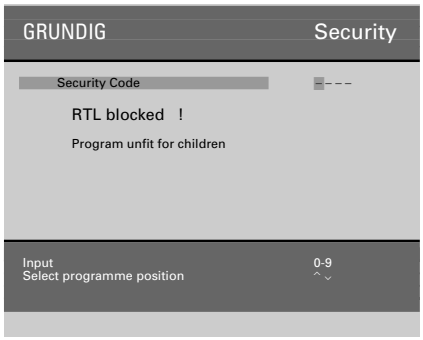
◀

c) Switch to TV mode.

i



You can block the broadcasts at any time.



If now a programme unfit for children is being broadcast, the table opposite appears on the screen (example RTL).

Memorize the stored security code!
If you should forget the code, switch to a non blocked programme position, call up the Security/Timer page and press the OK button. Then refer to the key on the last page (cover) which will help you.

3.2 Block all programmes *

a) Enter code as four places.

OK

1 … 0

OK

b) Select "yes" in the "Block all programmes" line

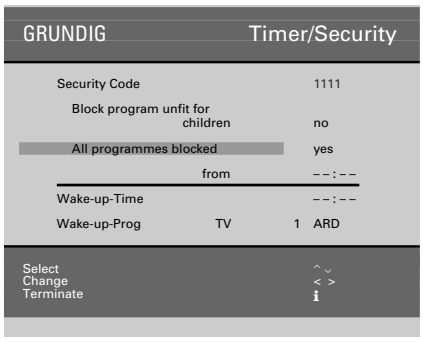
P–

◀ or ▶

c) Enter switch-off time (from...) (if desired)

P–

OK

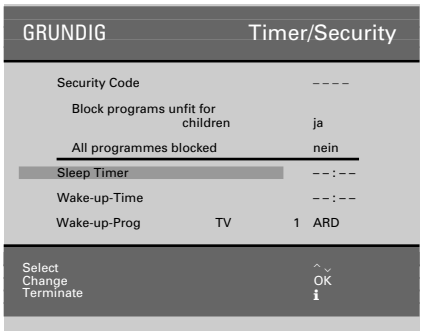
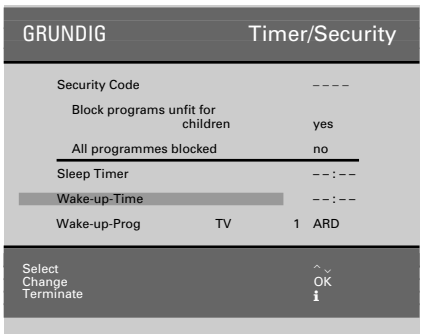


After the television has been turned off (automatically or with the standby button ⏻), it cannot be used by unauthorized persons.

Memorize the stored security code!
If you should forget the code, refer to the key on the last page (cover) which will help you.

* The steps 1 and 2 explained on page 19 must already be executed.

Convenient Functions

Press the following buttons on the remote control	You will see this on your TV screen	Explanations
1 … 0 OK d) Switch to TV viewing mode. i		The television switches automatically off at the entered switch-off time. When then switching on again, the table shown opposite will appear. The TV set can only be used again when you enter your personal identification code.
3.3 Entering a switch-off time (Sleep Timer) * a) Select "Sleep Timer". P– OK b) Enter switch-off time. 1 … 0 OK c) Switch to TV mode. i		The television automatically switches off (standby) at the set time.
3.4 Enter switch-on time (Wake-up Time) * a) Select "Wake-up Time" P– OK b) Enter switch-off time. 1 … 0 OK c) Switch to Tv mode. i		If the unit has been switched on with the wake-up function and does not receive a command via the remote control, it switches after 30 minutes automatically to standby. With the "Wake-up Prog" function (last menu line) you select <u>that</u> programme position with the programme of which you wish to be woken up. So that the TV set can switch on at the preselected time, if must be switched to standby (not off with the mains switch).

***** The steps 1 and 2 explained on page 19 must already be executed.

Special Functions

Calling up the Special Functions menu

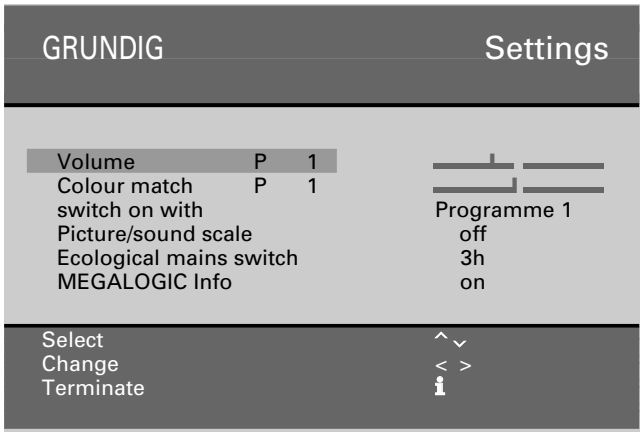
Call up the GRUNDIG Infocenter by pressing the ⓘ button then the OK button.

Press the cursor button P+ to highlight the "Special functions" line.

Press the OK button.
The "Special Functions" menu appears.

Calling up the "Settings" menu

Press the OK button.
The "Volume" line is highlighted.



Volume

If you receive a programme whose volume deviates from other channels (too loud or too low), you can adjust the volume.

Change the volume with the ◀ or ▶ button. Lautstärke ändern. Only the volume of the programme currently being selected is changed.

Colour match

Select "Colour match" with the P- button.
The line appears highlighted in blue.

Use ◀ or ▶ button to change colour match. Only the colour match of the programme currently being viewed is changed.

Press the ⓘ button to return to the TV picture.

Switch on with …

If you use the TV set frequently as AV monitor, for example together with a camera as supervisory system, you can use this function to give priority to the AV programme position. That means that after switching on the set the AV programme position will appear instead of the P1 programme position.

Select with P- and change the setting with ◀ or ▶.

Picture/sound scale

Press the P- button to highlight the "Picture/sound scale" line.

Press the ◀ or ▶ button to display (on) or not (off) the respective scale on the picture screen, such as

Ecological mains swich

With this switch the unit can be programmed so that it switches completely off from standby after a period of time selectable between 1 to 4 hours.

This helps you to save energy.

This energy-saving function is not possible if you have entered a wake-up time (see page 21, chapter "Entering a wake-up time").

MEGALOGIC Info

With the MEGALOGIC function, it is possible to display information about the connected video recorder on the picture screen.
Independent of the TV mode, you will be informed by brief displays about the current video recorder function.

For example: tansfer of TV stations table, playback, recording, fast forward wind, etc.

Press the P- button to highlight the MEGALOGIC line.

Use the ◀ or ▶ button to switch the information display on and off.
If no video recorder with MEGALOGIC functions is connected, select ”off”.

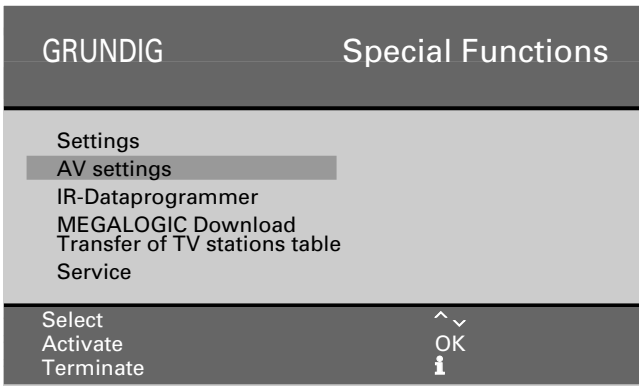
Special Functions

Calling up the Special Functions menu

Call up the GRUNDIG Infocenter by pressing the ⓘ button then the OK button.

Press the cursor button P+ to highlight the "Special functions" line.

Press the OK button.



AV settings

The AV settings menu is described from page 24 on.

IR-Dataprogrammer/Service

The IR-Dataprogrammer and Service functions are intended for the specialised dealer only. The Service function is protected by a security code.

Transfer of the TV stations table from the TV set to the video recorder (VCR)

The TV set is provided with the MEGALOGIC system.
In connection with a video recorder which is provided with the same system, operation of the two sets becomes very convenient.
It is possible to transfer the data of the programme positions (stored channels) from the TV set to the video recorder.
Programming the programme positions on the VCR then is no longer necessary.
After transferring the data, you can immediately record the programme from the TV set on the video recorder.
For this, the TV set (socket AV2) and the video recorder (Euro-AV socket) must be connected by means of a Euro-AV cable (all pins used).

Press the P− button to highlight the "Transfer of TV stations table" line then press the OK button.

During data transfer, the message ”Transfer of stations table” as well as the programme position number and the station name are displayed.

When data transfer is completed, the TV set is automatically switched to TV mode.

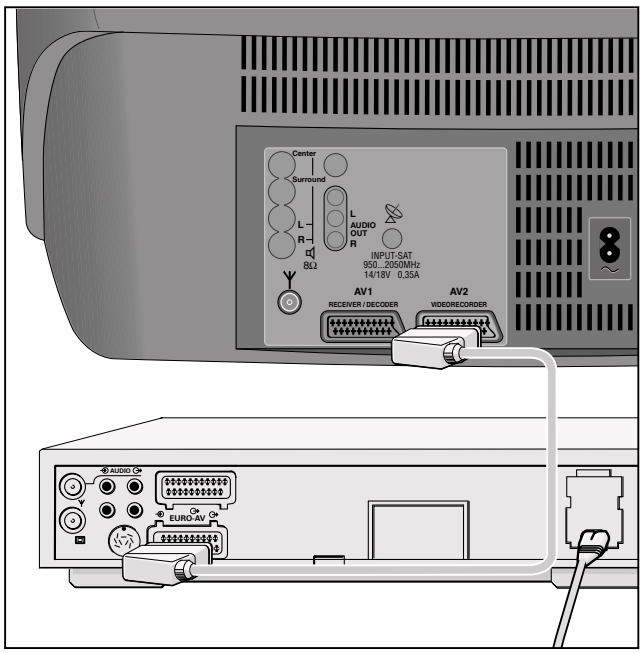
Connection Capabilities and Operation ...

The TV set is provided with a number of different sockets. You can connect various external units to these sockets, such as video recorder, SAT receiver, video camera, etc., and perform functions such as recording, playback, copying, etc. Before you can do this, the external unit must be adapted to the TV set. For this, the "AV Connections" menu is provided.

Call up the AV settings menu as follows:

Press the ⓘ then the OK button; the "Infocenter" menu will be displayed.
Press the P+ button; the line "Special Functions" is highlighted by a colour bar.
Press the OK button; the "Special Functions" menu will be displayed.
Press the P− button; the line "AV settings" is highlighted by a colour bar.
Press the OK button; the "AV settings" menu will be displayed.

...for Video Recorder



Playback from a Video Recorder

Connection

Connect the video recorder to the AV 2 socket.

Operation

Call up the "AV settings" menu (see above).

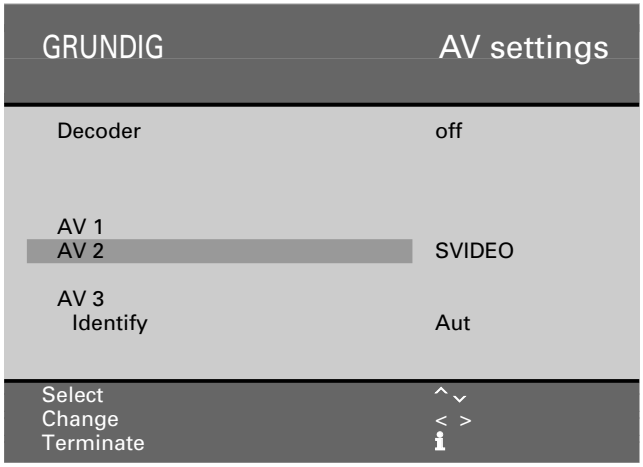
Press P− or P+ to select "AV2" (highlight in colour).

Press ◀ or ▶ to select between "Video" and "SVIDEO" (according to connected video recorder).

Leave the menu by pressing ⓘ.

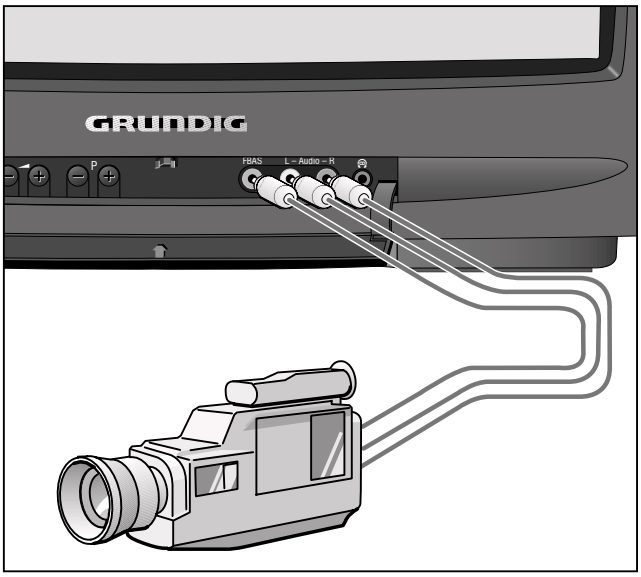
Start playback on the video recorder.

You will see the video playback on the picture screen and briefly the message AV 2 VIDEO and AV 2 SVIDEO respectively.



Connection Capabilities and Operation ...

... for Camcorder (VHS, Video 8)



Playback

Connecting the video signal

Connect the VIDEO IN socket with an appropriate cable to the corresponding video socket of the camcorder.

Connecting the sound signal

Connect the L AUDIO R sockets with the audio sockets of the camcorder. For mono playback, connect to the L AUDIO socket to the respective audio socket of the camcorder.

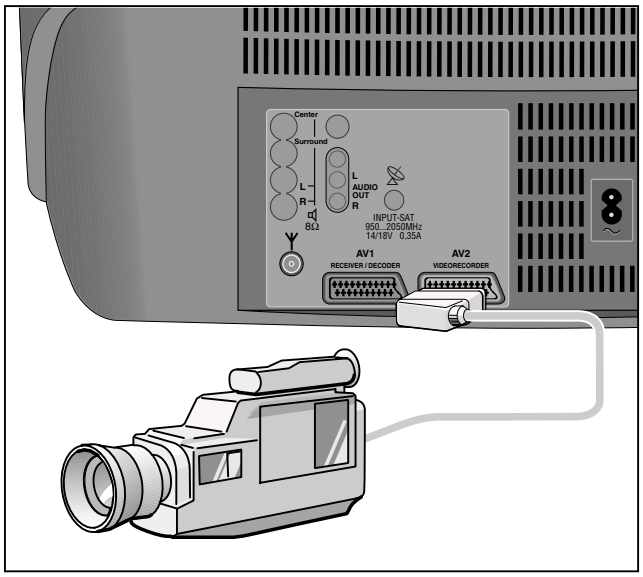
Operation

Call up the "AV setting" menu (see page 23).
Select "Identify" and "Auto" .
In the case of distortions, select "Off".

GRUNDIG	AV settings
Decoder	off
AV 1	
AV 2	SVIDEO
AV 3	
Identify	Auto
Select	^ v
Change	< >
Terminate	i

Press ⓘ to quit the menu.
Start playback on the camcorder.
Playback from the camcorder is visible on the picture screen.

... for S-VHS Video Recorder, S-VHS Camcorder or Hi 8 Camcorder



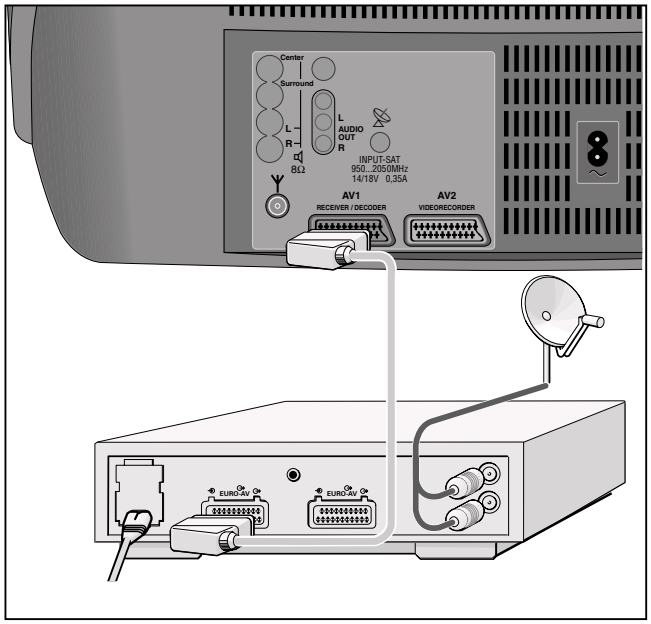
Playback

Connect the camera to the AV 2 socket.
Call up the "AV Connections" menu (see page 23).
Select "AV 2" and "S VIDEO".
Press ⓘ to leave the menu.

Start playback on the camcorder.
Playback from the camcorder is visible on the picture screen.

Connection Capabilities and Operation …

… for Satellite Receiver



Connection

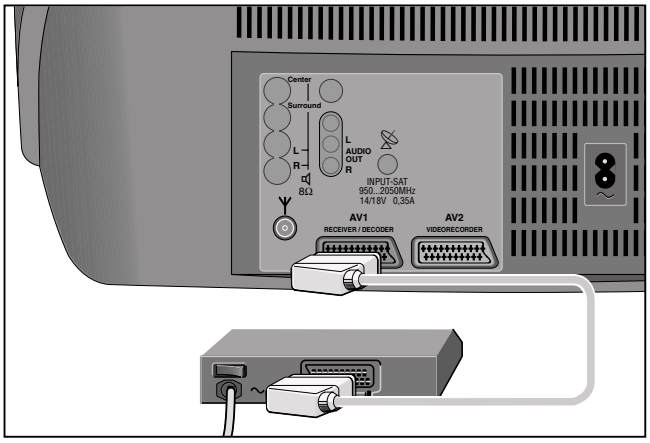
Connect SAT receiver to the AV 1 socket.

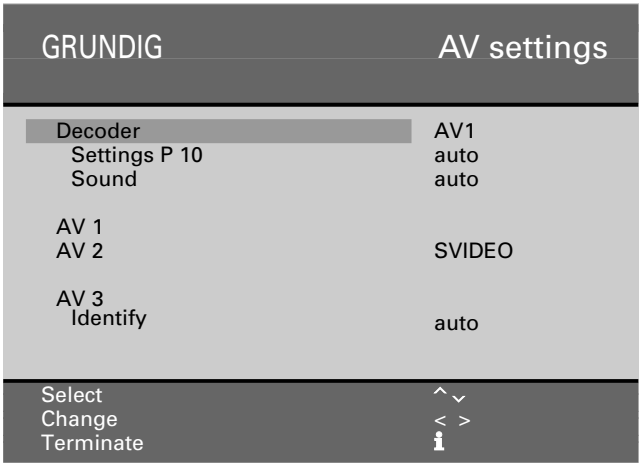
Operation

Select programme position "AV 1".
Switch on the SAT receiver.
Press and hold down the ❍ SAT button and enter the number of the desired programme position of the satellite receiver with the numeric buttons ⓪…⑨.

This TV set is prepared for satellite reception. As extension kit, the module SER 6350 is provided. Ask your specialized dealer for further details.

… for Descrambler (Decoder)





Connection

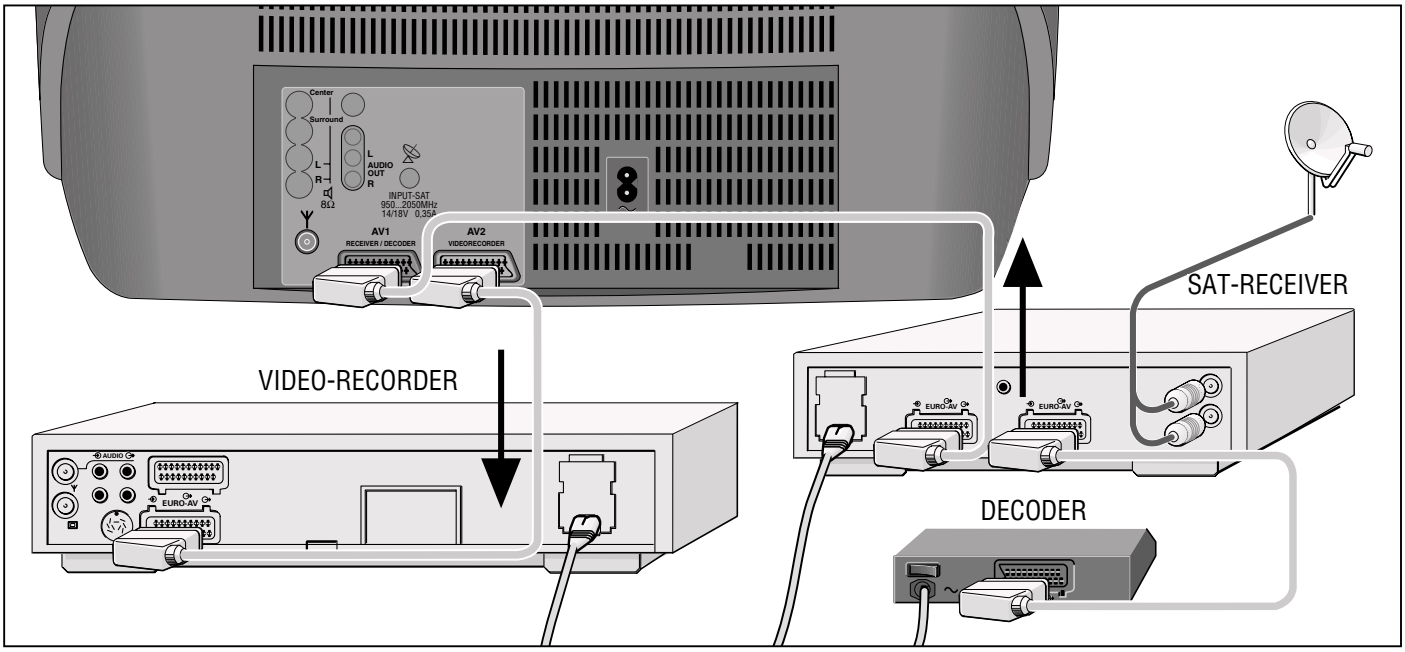
Connect decoder to AV 1 socket.

Operation

Call up the "AV settings" menu (see page 24).
Select "AV 1" and "Decoder".
The indication P 10 means Programm position 10 is selectet.
Leave the menu.
If "Decoder" or "Audio" is selected under "Settings" in the menu, "Auto" is always activated (factory presetting).
Normally, this needs not be changed.
However, with external units which do not meet the technical standard of this TV set, it may be necessary to make a different setting. If this should be the case, contact your specialized dealer.

Connection Capabilities and Operation …

… for Video Recorder | **… for Satellite Receiver** | **… for Descrambler (Decoder)**

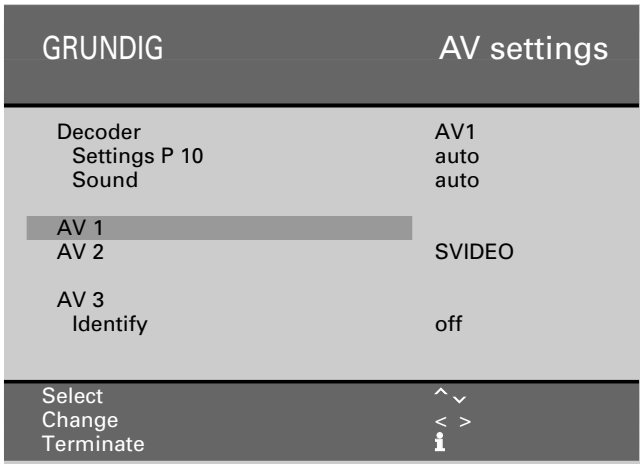


…for several external units

If you wish to connect several external units at a time, e.g., descrambler, satellite receiver, video recorder, you should make the connections according to the example shown above.

For satellite TV reception
Descrambler ⟶ Satellite receiver ⟶ TV set
(socket AV 1).
In this case, connect the video recorder to the AV 2 socket.

For cable TV reception
Descrambler ⟶ Video recorder ⟶ TV set
(socket AV 1)



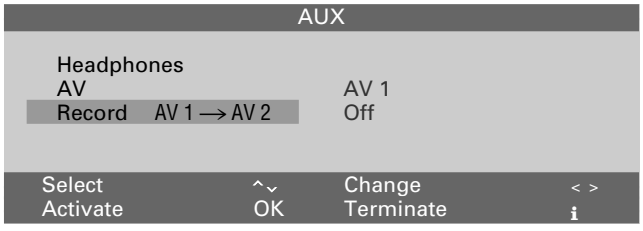
Example

You wish to record a satellite programme.

Operation

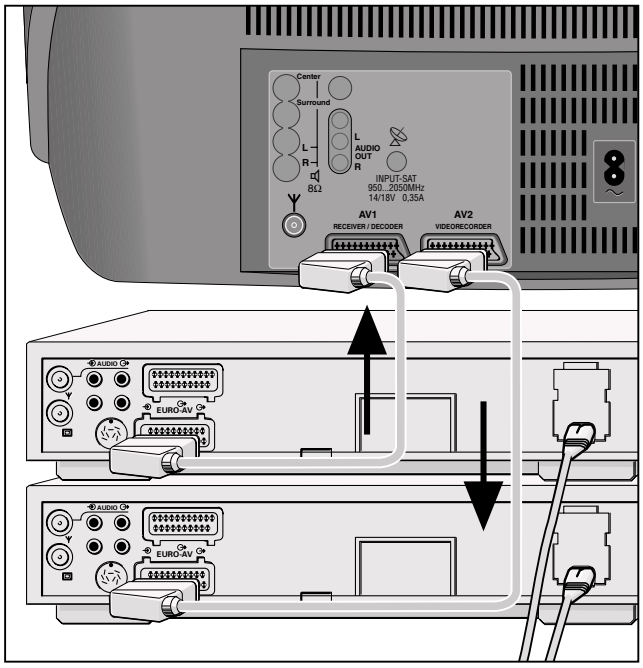
Changing with the button 0 AV the programme position AV 1.
Select the desired satellite programme.
Call up the "AV settings" menu.
Select "VCR/SAT in the first menu line AV 1.
Select "Video" or "SVIDEO" in the second menu line AV 2 (depends on video recorder type).
Quit the menu.
Start the recorder.

If you wish to switch the TV set to standby or to a TV programme during copying, you must first call up the AUX menu by pressing the AUX button then select "Record On".



Now you can watch any desired TV programme on the TV set without disturbing copying, or you can switch to standby to save energy.
When copying is completed, select "Record Off" again.

Copying Recordings via the Television



You can copy from unit … to unit …:

Video recorder	→	Video recorder;
Camcorder	→	Video recorder;
S-VHS recorder (FBAS sign.)	→	VHS recorder;

from socket … to socket …:

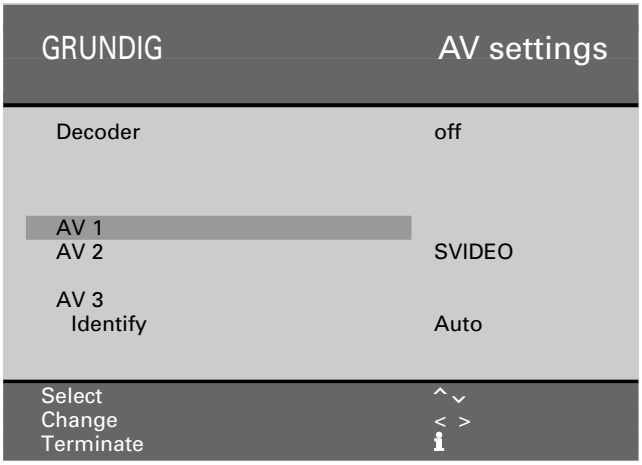
AV 1 socket	→	AV 2 socket
AV 3; front sockets (composite signal)	→	AV 2 socket

Connection

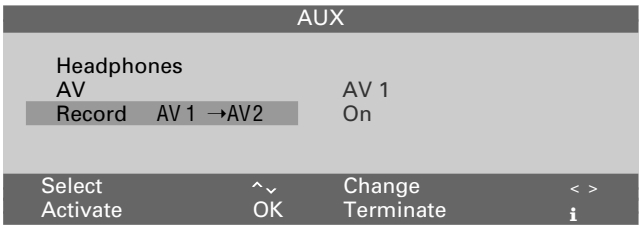
(according to above example)
Playback recorder to AV 1 socket.
Recording recorder to AV 2 socket.

Operation

Call up the "AV settings" menu (see page 24).
Depending on the kind of recording and connected units, select "Video" or "S VIDEO" in the AV 2 line.
Press ⓘ to leave the menu.
Start both recorders.



If you wish to switch the TV set to standby or to a TV programme during copying, you must first select you must first select the AUX menu by pressing the AUX button then select "Record On".
Now you can watch any desired TV programme on the TV set without disturbing copying, or you can switch to standby to save energy.
When copying is completed, select "Record Off" again.



Connection for copying from camcorder to video recorder

Connection for camcorder see page 25.
Connect the recording recorder to the AV 2 socket.

Operation

Call up the "AV settings" menu (see page 24).
Select "Identify" and "Auto"
Select "Socket" and "SVIDEO" or "Video"
Depending on the kind of recording and connected units.
Continue as in the operating example above.
The AUX menu conteins among other things:
Record AV 3 → AV 2.

Specification

Mains voltage

220-240V, 50/60Hz
(power supply control range 165 … 265V)

This unit may only be operated with the power supply cable set which has been supplied. It prevents interference from the mains, and is considered an obligatory component of this unit.

For a replacement, contact the nearest customer service center and order only the power supply cable set with the following designation:
GWN 9.22/article number 8290.991-316.

Power consumption

approx.100 W

In standby 10 W

Channel coverage

C01 … C99
Special channels S01 … S41

This TV set is prepared for satellite reception. As extension kit, the module SER 6350 is provided. Ask your specialized dealer for further details.

Sound output

2 X 20 W music power (2 x 10 W sine power)

Service note for the dealer

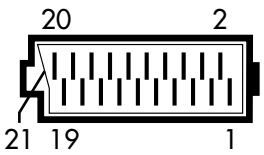
This unit conforms to VDE safety regulations and directives of the Deutsche Bundespost (German Federal Post Office; see certification mark on the type sticker on the rear of the unit), as well as all relevant ordinances governing X-ray emissions. The picture tube, which emits X-rays, is sufficiently shielded and therefore represents no danger. Accelerating voltage is max. 34kV with a mean beam current of 1.6mA.

Unauthorized tampering with the unit, in particular making adjustments to the high voltage system, or installing a different picture tube, can considerably increase X-ray emissions. Units so altered no longer conform to applicable safety regulations and may not be operated.

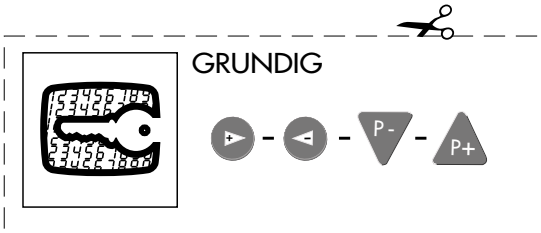
Pin assignment of EURO-AV socket

If you want to connect other devices to your television (for example, a computer or amplifier), your dealer can provide you with a normed standard connection by means of the following table:

Pin		Signal
1	=	Audio output right
2	=	Audio input right
3	=	Audio output left
4	=	Audio, earth
5	=	Blue, earth
6	=	Audio input left
7	=	RGB blue input
8	=	Switching voltage
9	=	Green, earth
10	=	Data line (MEGALOGIC)
11	=	RGB green input
12	=	–
13	=	Red, earth
14	=	Earth
15	=	RGB red input
16	=	RGB switching voltage
17	=	Video, earth
18	=	RGB switching voltage, earth
19	=	Video output
20	=	Video input
21		Shielding/earth



Subject to alterations.
E. and O.E.



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